

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2004/001890

A. CLASSIFICATION OF SUBJECT MATTER

F16J 15/02; F16K 27/06; F16K 5/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC-6th: F16J 15/02; F16K 41/04; F16K 27/06
USPC: 251/214; 272/532

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No(s).
X	JP 04191581 (Hirakawa) 09 July 1992	1, 7
X	JP 07167340 (Nakanishi) 04 July 1995	1, 2, 3, 4, 5, 6, 7, 8, 9
A	US 3185487 (Haessler) 25 May 1965	

[] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

* Special categories of cited documents :
 "A" document defining the general state of the art which is not considered to be of particular relevance
 "E" earlier application or patent but published on or after the international filing date
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 "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
 "&" document member of the same patent family

Date of the actual completion of the international search
03 February 2005 (03-02-2005)

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11 March 2005 (11-03-2005)

Name and mailing address of the ISA/CA
Canadian Intellectual Property Office
Place du Portage I, C114 - 1st Floor, Box PCT
50 Victoria Street
Gatineau, Quebec K1A 0C9

Authorized officer
Mark Janczarski (819) 953-8842

Facsimile No: 001(819)953-2476

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CA2004/001890

Patent Document Cited in Search Report	Publication Date	Patent Family Member(s)	Publication Date
JP04191581		NONE	
JP07167340		NONE	
US3185487		NONE	